COTTON CHATS

FROM

DRAPER COMPANY

SHIPMAN'S
COMMON-SENSE BINDER

PATENTED

JANUARY 19, 1892. APRIL 19, 1904

To open binder, remove the slides from fasteners raise the fasteners to an erect position and then file papers. For punching: lay the papers on covers and mark sheets to correspond with fasteners.

If DUPLICATE is wanted ORDER 25981

ASA L. SHIPMAN'S SONS
MANUFACTURERS,
NEW YORK.

COTTON CHATS

By the secretary of the

DRAPER COMPANY,

HOPEDALE, MASS.

No. 55. OCTOBER, 1906.

POSSIBLE PROFITS.

A long period of trial with various improvements on common looms has resulted in certain manufacturers adopting a 10-loom basis instead of an 8-loom basis for wages paid on looms using long bobbins without warp-stop motion, and a 12-loom basis for wages paid on looms using both the long bobbins and warp-stop motion. It is understood that the Weavers' Union has officially denied the justice of such a schedule, claiming that the changes do not assist the weaver sufficiently to warrant the running of these additional looms. We sold our original Northrop looms on the proof that an 8-loom weaver could run 16 Northrop looms. Whatever advantage there may be in the long bobbin is equally adaptable to the Northrop loom, so that on the same basis a 10-loom weaver with long bobbins could certainly run 20 Northrop looms with long bobbins. As a matter of fact, there are mills averaging 24 Northrop looms to the weaver with **short** bobbins. We understand the changes to the long bobbin are usually made without additional expense other than that involved by new shuttles and the setting of the loom to run the new shuttles. With the warp-stop motion looms it is usually figured that the cost of the stop-motion with the application, loss of time, changing, etc., is about $25 with the styles of warp-stop motion usually adopted. If a mill **must** run their common looms, there is no reason why they should not run the long bobbin if they can make satisfactory arrangements with their help. There is some question, however, whether the expense of altering over old looms to warp-stop motions is warranted, in view of the greater saving by automatic looms. The $25,000 that it would require to change over 1,000 common looms might be better spent in buying complete new Northrop looms. If we are to credit

the contentions of manufacturers who claim that with the long bobbin and warp-stop motion their 12-loom weavers are doing no more work than on the 8-loom system with short bobbins, we should ask on our own part that they credit our contention that these same weavers with the same yarn on the same goods, could run 24 or more Northrop looms. When mill-men begin to figure on automatic loom profits they have sometimes adopted serious fallacies. There is grave chance for error in dealing with the items of interest and depreciation. For instance, if we assume a Northrop loom cost of $140 and a common loom cost of $50 to make the same goods, there is an extra cost of $90 to be paid out of extra earnings. If we took 5% for interest =$4.50 and 10% for depreciation=$9, we have $13.50 to offset against the loom earnings; but this is not fair figuring for each year as can easily be explained. The extra $90 should be treated as if it were a debt to be paid. Now if at the end of the first year we charge 5% interest on the $90, we have $4.50 out of earnings but the 10% depreciation of $9 is a practical payment of the debt to that amount and thus reduces the debt to $81. It is on **this** sum that the interest for the next year is to be paid =$4.05 and the depreciation is now but $8.10. The columns following give the totals year by year.

Interest on	$90	=	$4.50	Depreciation = $9		first year.
" "	81		4.05	"	8.10	2nd "
" "	72.90		3.65	"	7.29	3d "
" "	65.61		3.28	"	6.56	4th "
" "	59.05		2.95	"	5.90	5th "
" "	53.15		2.66	"	5.32	6th "
" "	47.84		2.39	"	4.78	7th "
" "	43.06		2.15	"	4.30	8th "
" "	38.76		1.94	"	3.88	9th "
" "	34.89		1.74	"	3.49	10th "
" "	31.41		1.57	"	3.14	11th "
" "	28.27		1.41	"	2.83	12th "
" "	25.45		1.27	"	2.55	13th "
" "	22.91		1.15	"	2.29	14th "
" "	20.62		1.03	"	2.06	15th "
" "	18.56		.93	"	1.86	16th "
" "	16.71		.84	"	1.67	17th "
" "	15.04		.75	"	1.50	18th "
" "	13.54		.68	"	1.35	19th "
" "	12.19		.61	"	1.22	20th "
			20)39.55		20)79.09	
			Average = 1.98		Average = 3.95	

The average yearly interest and depreciation for twenty years is therefore $1.98 + $3.95 or $5.93. There is still some $12.19 left to be paid on the original extra cost, but the extra mechanism will certainly be worth that much at that time—and considerably more.

Now, if a weaver earns $10 a week on 8 common looms and is given $12 a week on 24 Northrop looms with the same product per loom in each case, a perfectly feasible assumption, there will be a weekly saving on each Northrop loom of 75 cents, or $39 per loom per year, a net saving with average interest and depreciation out, of $33.07. If, instead of 24 Northrop looms at $12 wages, we assume 20 Northrop looms at $10 wages, the saving is precisely the same, and it is certainly easier to run 20 Northrop looms than 8 common looms on the same goods. We claim that it is easier to run 24 Northrop looms, but we have conceded an extra pay on this number, to overcome the conservatism of the operative.

Now understand that the $33.07 is **net** profit. Reduce it by every possible or unauthorized estimate and it must still be noticeable and important. Call it $30 or $25 or $20 it is still $300, $250 or $200 in 10 years (more, with allowance for interest on the savings) or $600, $500 or $400 in 20 years.

Capitalize the saving of $33.07 at 5% and it would show the Northrop attachments worth $661.40 each. At 10% they are worth $330.70 each.

There are those who claim that the Northrop loom will not run as fast as the common loom. This is merely a matter of adapting speed to results. The Northrop loom does run as fast as common looms in a great many mills where they have both styles. In other mills it gets off as much product as common looms which run faster, as it produces a greater percentage of product. There are others who say that there are heavy extra charges on the Northrop looms, such as repairs and supplies. We have figures from several mills where they run both Northrop and common looms, where their supplies and repairs are less on the Northrop. We recently saw figures from one mill with a large equipment of Northrop looms, where their supplies and repairs figured but $1.50 per loom per year, though we admit this is exceptional. Some claim the Northrop takes more power. This may be true in part, owing to our stronger and heavier construction, but this very

strength adds to the life of the loom and reduces repair charges. The total power consumed by a loom is immaterial when considering the economies of automatic weaving. There are those who think that in a few years they can buy automatic looms at less price, but we have tried to show in several former printed statements that such a hope is not to be realized for many a year to come. In our figures we have assumed a depreciation of 10%, which is more than that assumed by most conservative opponents to meet just such an argument. Automatic looms will never sell near the price of present common looms; that is, automatic looms that can compare in performance with our own, for we put heavy additional expense into the machine as a whole, and we realize the present excess in cost in spite of a modern factory and the advantage of manufacturing in great quantity.

We have been quite modest in our claims of profit to the user of our loom in former literature, but conditions are changing and they are changing to our advantage, for higher wages for weavers mean more saving by automatic machinery. High wages are with us, and with a scarcity of help all over the country there is no relief in sight.

The mills now working under the disadvantage of being short in help can readily see how the Northrop loom immediately increases the number of operatives available. By putting in Northrop looms in a room where a considerable percentage of looms are now stopped, there will be plenty of weavers to run all the new looms, with a surplus of help which can help out other departments. A study of our present order list would show that many mills are following just such a system as we now propose.

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